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Dr. Morton read a notice by Mr. M. Tuomey, State Geologist of South Carolina, of his discovery of the Cranium of *Zeuglodon cetoides*, Owen, in the vicinity of Charleston; accompanied with a drawing of the same. Referred to Dr. Morton, Mr. R. C. Taylor and Dr. Leidy.

A letter was presented by Mr. Moss, addressed by Mr. Graf of St. Petersburg to Baron Wrangel, in relation to exchanges of Birds between the latter and the Academy. Referred to the Zoological committee.

Mr. Gliddon presented a translation of the Hieroglyphical inscription on the Sarcophagus of the Egyptian Mummy now in the Academy.

Meeting for Business, February 23, 1847.

VICE PRESIDENT WETHERILL in the Chair.

The Committee to whom was referred Mr. Haldeman's paper read on the 2d inst., reported in favor of publication.

Descriptions of several new species and one new genus of Insects.

BY S. S. HALDEMAN, A. M.

BLETHISA quadricollis. Black, somewhat bronze; head elongate, transversely impressed behind the eyes, which are prominent; frontal impressions long and bisinuate, posteriorly connected with the transverse impression; labrum quadrate, slightly bisinuate anteriorly; antennæ steel blue, as long as the head and prothorax, four basal articulations glabrous. Prothorax quadrate, bitruncate, wider than the head, slightly rounded on the sides anteriorly, and very slightly sinuated behind the middle; posterior angles rounded; margin depressed and reflexed; transverse impressions very deep, the anterior one in the arc of a circle; dorsal line deep, transversely wrinkled, bi-abbreviated; basal impressions deep, punctured, with an obtuse slightly elevated ridge near the margin. Elytra a little wider than the head, obtusely rounded behind; deeply punctate-striate, striæ somewhat interrupted; 3d interstice with four or five large foveæ; 5th with three foveæ, the anterior one being behind the anterior one of the other range; 6th with two foveæ, one below the humerus, and one (sometimes

obsolete) towards the apex; margin subcupreous, with confused ranges of smaller punctures; legs steel blue; anterior femora with a very slight prominence in the female. $7\frac{1}{2}$ l. long. 3 l. wide.

Found by Mr. Joshua Child upon the Southern shore of Lake Superior. The elytra agree with those in *B. multipunctata*, *Fab.* and the thorax apparently with that of *B. eschscholtzii*.

*CHOREA. Body short, robust, and of a rather solid consistency; head small, deflected; maxillary palpi robust, prominent, last joint largest, and triangular; antennæ short, serrate, not sensibly tapered, placed between the eyes and a little removed from them, which renders them approximate; they are inserted upon each side of a slight frontal elevation, and are borne parallel, arched over the thorax and extending a little beyond the scutel. Prothorax short, transverse, inflated, anterior angles obtusely rounded, posterior ones produced in a sharp angle. Scutel rounded. Elytra elongate, texture solid, with wings beneath. Abdomen of five inflated segments. Feet slender, the *posterior coxæ very long*, being as long as the femur proper, which is much reduced in length, although the limb is of ordinary length. Tarsi with short hair, but scarcely pulvillate; penultimate articulation bilobed. Probably a female.

A single individual taken upon the porch of my residence. It endeavored to liberate itself by a sharp click, which, with the shape of the prothorax, led me to suppose it an Elater. The click was produced by approximating the anterior femora along the breast and separating them with a sudden jerk which could be heard and felt. There is nothing apparent in the structure of the anterior feet to indicate this peculiar use of them.

CHOREA *pulsator*. Dull black, minutely punctured, slightly hairy; palpi bright testaceous: tarsi and tibiæ dull rufous; pronotum covered with piliferous punctures, dorsal line not apparent; elytra with nine striæ filled with large elongate punctures. 4 l. long. Pennsylvania, in April.

EBURIA *distincta*. Flavescent, covered with a short whitish pubescence; labrum fringed with fulvous hair; front imprest; medial line of the head glabrous posteriorly; prothorax subcylindric, narrowed before, with an anterior and posterior transverse impression; sides armed with a short spine; disk on each side, a little before the middle, with a round black glabrous tubercle; elytra with a basal and medial pair of approximate stigmata, the former somewhat oblique, the latter with the interior one about half the length of the exterior. 10—12 lines long. Georgia and Mississippi.

Distinguished from the more northern species *E. 4-geminata* *Say*, *distincta* *Dejean*, by a more dense pubescence, less globular prothorax with its deeper lines and larger tubercles; and the shorter internal posterior stigma.

ENAPHALODES simplicicollis. Dark brown, elytra somewhat paler from a short pubescence; prothorax subglobular, minutely granulate; dorsal line slightly impressed posteriorly, a lateral obsolete impression before the middle towards the exterior margin; elytra sparsely and deeply punctured, bi-spinose at tip. $11\frac{1}{2}$ l. long. Georgia. Distinguished from *E. lecontei*, Dejean, (*pulverulentum*, Fabr., hitherto considered an *Elaphidion* by me) in having a smaller prothorax, a darker color, and in being less. For the opportunity to describe this and the next species of *Longicornia*, I am indebted to the kindness of my friend Dr. J. L. Le Conte, in whose cabinet they are.

STENURA? cyanea. Brilliant metallic blue with greenish reflexions: front impressed, antennæ, mandibles, labrum, terminal joint of palpi, and scutel, black; elytra scabrous with confluent punctures; femora rufous, apex and extreme base, with the tibiæ and tarsi, blackish. 6 l. long. Lake Superior.

PLIARIA maculata. Brown, superior wings pale grey with whitish reticulations, and maculate with brown, darkest towards the base, where there is a long conspicuous triangle with its apex extending to the base; anterior edge of the wing with a single series of spots, apex with a semicircle of large ones. 2. l. long. Pennsylvania, in July.

The only specimen of this well marked species is imperfect, and although taken several years ago, a second individual has not been seen.

The Committee on Mr. Tuomey's paper read at last meeting, reported in favor of publication.

Notice of the discovery of a Cranium of the ZEUGLONDON.

By M. TUOMEY, State Geologist of South Carolina.

Almost every day adds something to our knowledge of those remarkable forms, which in the revolutions of time have passed out of existence. In 18—, Dr. Harlan described and figured in the Transactions of the Geological Society of Pennsylvania, some fossil bones from Alabama, consisting of portions of the upper and lower maxillæ of an animal under the name of "*Basilosaurus*," from an impression that they belonged to a gigantic Saurian. An examination of the teeth, however, satisfied Professor Owen that these remains belonged to a Cetacean, to which he has given the name "*Zeuglodon*."

The first description of an entire tooth of this animal, was given by Mr. Buckley, in a concise account of the discovery of a considerable portion of the skeleton, published in the *American Journal of Science* in 1843. In 1845, Dr. R. W. Gibbes, of South Carolina, published in the Proceedings of the Academy of Natural Sciences

of Philadelphia, accurate figures of similar teeth with fragments of the lower maxilla. The teeth being hollow, and, in his opinion presenting other important differences, he constituted for them a new genus, "Dorudon."

The "Hydrarchos," I believe, has passed away without advancing our knowledge upon this interesting subject, excepting perhaps that Prof. Wyman discovered in the extremity of the ribs some cetacean characters.

The next important development consisted in the publication by Professor Emmons, in the American Quarterly Journal of Agriculture, beautiful figures of the teeth, anterior portion of lower maxillæ, together with a portion of the ramus having the coronoid process and condyle almost perfect, cervical and caudal vertebræ, and a rib. But up to the present time, no notice has appeared of the discovery of any considerable portion of the cranium proper—for the mutilated head of the so called Hydrarchos can scarcely be considered an exception.

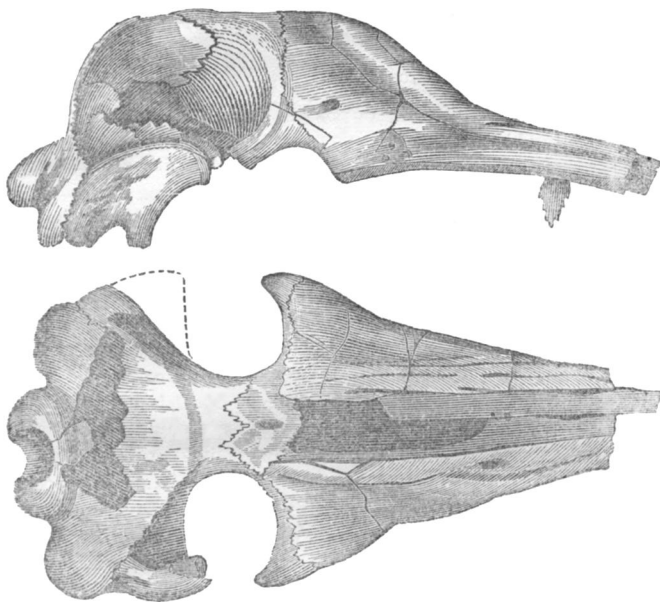
Early in January I was presented by F. S. Holmes, Esq., with a portion of the left upper maxilla, containing one tooth and the alveolæ of several others, which he discovered in the Eocene beds of Ashley river, about ten miles from Charleston. Soon after, Prof. Lewis R. Gibbes, of the College of Charleston, visited the same locality, and had the good fortune to find the rest of the skull, much fractured, but so carefully were the fragments collected, that with a little patience we were enabled to restore them to their proper places. It is then altogether to these gentlemen that we owe a knowledge of this valuable fossil.

Description. Occipital bone somewhat semicircular, transversely flat or slightly concave, central portion thin; a crest-like ridge surrounds the superior portion terminating in the suture with the temporal bone. Condyles two, articulating surfaces lunate, and almost enclosing the foramen magnum. Foramen magnum oval; transverse diameter $1\frac{1}{2}$ inches, vertical diameter 1 inch; transverse processes thick, spreading, making the breadth of the base of the cranium equal to its diameter across the zygomatic processes; jugular foramen $\frac{1}{2}$ inch in diameter; temporal bones small, mastoroid portion thick and strong but not prominent; articulating cavities for condyles of lower maxillæ large, forming about 30° of a circle, inclining inwards and backwards; maxillæ thick and strong, vertical section triangular; a cavity for nerves and vessels runs within at the points of the roots of the teeth; alveolar process thick; palatal bone strong, anteriorly emarginate and horizontal, posteriorly descending below the alveolar process.

Frontal bone and anterior portion of maxillæ wanting; walls of the nasal canal smooth; sutures squamous; in the left maxilla one tooth remains, which is solid, spear-shaped, edges coarsely serrate, exterior side flattened, interior side convex; agreeing in this respect with the position of the teeth in the shark; roots double,

nearly parallel, and inserted obliquely backwards; in the right maxilla are the alveolæ for eight teeth with double roots. In the solidity of the teeth and slight divergency of the roots, this specimen agrees with the figures of Dr. Harlan and Prof. Emmons.

This fossil is particularly interesting, as it removes every doubt, if any remain, of the true character of the animal to which it belonged. The double occipital condyle shows it to have been a mammal, while the squamous sutures and a symmetrical form refer it to the Cetaceæ.



Dimensions. Length $14\frac{1}{2}$ in.; greatest breadth $7\frac{1}{2}$ in.; height $5\frac{1}{2}$ in.; length of enameled portion of tooth $\frac{7}{8}$ in.; breadth $\frac{3}{8}$ in. It was evidently a young individual.

Geological position. The teeth described by Dr. Gibbes were found in the oldest of the calcareous beds of the Eocene of South Carolina, which contain *Cardita planicosta* and other well known Eocene fossils, together with *Gryphea mutabilis* and *Terebratula harlani*, which are also common to the cretaceous formation. And the fossil just described was found in upper beds of the Eocene so that the Zeuglodon must have existed through the whole of the Eocene period; a period which, in South Carolina, was at least sufficiently long for the deposition of three hundred feet of calcareous and sedimentary matter; a fact which was ascertained by boring at Charleston.

Remarks on the Birds observed in Upper California.

BY WILLIAM GAMBEL.

(Continued from page, 115.)

PASSERES.

Genus *CHAMÆA.†

Bill short, tapering to the point, acute and compressed. Both mandibles entire, ridge of upper elevated, and curving nearly from the base; the depression for the nostrils large, oval, and exposed; the nostrils opening beneath a membrane in the depression. Wings very short and much rounded. Tail very long and graduated. Tarsus long.

Chamæa fasciata, Nobis. Ground Tit.

Parus fasciatus, nobis, Proceed. Acad. Nat. Sc., vol. 2, p. 265.

This interesting bird, placed provisionally among the Titmice, I have now made the type of a new genus, not being able, as yet, to find a suitable place for it, among those already described.

For several months before discovering the bird, I chased among the fields of dead mustard stalks, the weedy margins of streams, low thickets and bushy places, a continued, loud, crepitant, grating scold, which I took for that of some species of wren, but at last found to proceed from this Wren-Tit, if it might so be called. It is always difficult to be seen, and keeps in such places as I have described, close to the ground; eluding pursuit, by diving into the thickest bunches of weeds and tall grass, or tangled bushes, uttering its grating wren-like note whenever an approach is made towards it.

But if quietly watched, it may be seen, when searching for insects, to mount the twigs and dried stalks of grass sideways, jerking its long tail, and keeping it erect like a wren, which, with its short wings, in such a position it so much resembles. At the same time uttering a very slow, monotonous, singing, chickadee note, like *pee pee pee pee peep*; at other times its notes are varied, and a slow whistling, continued *pwit, pwit, pwit, pwit, pwit, pwit*, may be heard. Again, in pleasant weather towards spring, I have heard them answering one another, sitting upon a low twig, and singing in a less solemn strain, not unlike a sparrow, a lively *pit, pit, pit, tr r r r r r r r*, but if disturbed, at once resuming their grating scold.

Parus inornatus, Nobis. Plain Titmouse. Proceed. Acad. Nat. Sc., vol. 2, p. 265.

The Plain Titmouse I first discovered near Monterey on the 20th of November. It was actively flitting about among the evergreen oaks of the vicinity, in company with large flocks of the Chestnut-backed and Least Titmouse, all in restless activity, searching every branch for insects.

Among the busy throng I could not well distinguish its notes, but they appeared to resemble very much those of the common Black-cap, and on my following it up, uttered a loud scold, erecting its high and pointed crest, and looking as angry as possible at the intrusion.

† From *χαμαί*, on the ground.

I afterwards found it common, frequenting in small flocks tall bushes and branches of small trees, uttering a weak and slender *tsee day day, tsee day day dait*.

Parus montanus, Nobis. Rocky Mountain Titmouse. Proceed. Acad. Nat. Sc., vol. 1, p. 259.

I have already stated all that I know of this new and handsome species, in the description contained in the number of the Proceedings above referred to.

It was exceedingly abundant in the western ranges of the Rocky Mountains, particularly in the high ridges near the great salt lake, in the wooded portions of which they were roaming in large flocks, and from thence to the Californian ridge, on the other side of which I never saw them. In habits, as well as appearance, it resembles very much the *P. atricapillus*, but is at once distinguished by the two white lines, running over the top of the head to the occiput.

Parus rufescens, Towns. Chestnut-backed Titmouse.

In the latter part of summer and during the winter season, the young of this species are found around Monterey in large flocks.

Parus minimus, Towns. Least Titmouse.

This interesting and most diminutive bird, is exceedingly abundant in the Rocky Mountains and California. During winter, the otherwise cheerless woods, are alive with busy, noisy troops of these industrious birds, gleaning their scanty fare in company with the Ruby-crowned Kinglet, in every possible manner and position from bush or tree.

It is curious to watch them in this anxious solicitous search for food, keeping up a continual twittering; so intent are they in their employment, that they appear to lose sight of danger, and often have I been so surrounded by a flock, that I could have almost caught them in my hands.

The above additional species, together with the *P. septentrionalis*, recently described by my friend Mr. Edward Harris, in the Proceedings of the Academy, have increased the number of North American Titmice, exclusive of the Ground Tit, to nine species.

Trichas Marylandica. Maryland Yellow Throat.

This species, distributed throughout the whole of North America is common, both in the Rocky Mountains and California.

Vermivora celata, Say. Orange-crowned Warbler.

Flocks of this species are common during winter in Upper California, frequenting low bushes and margins of streams. On the Island of Santa Catalina in early spring I heard its simple though lively song, commencing in a loud sweet shrill and ending *tshé up*, sometimes considerably varied, but generally *er r r r r r tshé up*.

Sylvicola Auduboni, Towns. Audubon's Warbler.

This handsome warbler is abundant throughout the West. I first observed it in New Mexico, thence through the ranges of the Rocky Mountains to California, where, particularly during winter, the young birds are found in large flocks, and generally in the tops of trees. Its habits as well as

appearance they resemble the Yellow Rump, *S. coronata*, and like them also, display a great deal of familiarity, entering the towns, and resorting to gardens and fence rows, and even the corals of the houses; frequently also, descending to the ground with the Blackbirds and Sparrows.

Sylvania pusilla. Wils. (Nutt.) Green Black-capped Flycatcher.

Myiodyoctes Wilsonii, Aud.

This pretty little Sylvan Flycatcher is common both in the Rocky Mountains and California.

Culicivora caerulea, Lath. Blue-grey Flycatcher.

Abundant in Upper California.

Tyrannula pusilla. Swains. Little Pewee Flycatcher.

I observed this species to be plentiful about the Pueblo delos Angeles in Upper California, where most probably they breed. During the month of April, it frequented the hedges of vineyards and neighboring trees, uttering a sweet and considerably varied song. The following description of an adult killed there in the spring, may be useful, to show that it is the same bird as that described by Swainson in the Arctic Zoology, and that found in Labrador by Audubon. Above greenish olive; wings and tail dusky brown, the coverts tipped with dull white, forming two bands on the wing; the tertiaries also broadly edged with the same. Below yellowish, brightest on the lower part of the throat and breast, and on the abdomen. Feet and legs bright lead-blue. A yellowish ring around the eye. Upper mandible black, the lower pale flesh colored; inside of both, orange. Tail even, $2\frac{1}{2}$ inches; wings $2\frac{3}{4}$ inches. Tarsus $\frac{5}{8}$. Bill along ridge about $\frac{3}{8}$, from angle of mouth $\frac{5}{8}$. Total length 5 inches. First quill a little shorter than the 6th; 3rd and 4th nearly equal. The bird has a conspicuous crest.

Tyrannula Sayi, Bonap. Black-tailed Flycatcher.

T. pallida, Swans. Syn. Bds. of Mexico.

This species, common throughout the western regions of our country, is particularly so in California and the northern provinces of Mexico. Its manners much resemble those of the common Pewee, frequenting the neighborhood of towns, weedy hill sides and plains, darting from twig to twig after passing insects, jerking its tail, and merely uttering a single weak and singing *chip*, or an occasional guttural twitter, but very different from the harsh angry *tship* of the *T. nigricans*, with which it is so often associated. It breeds in California, and no doubt like its dark companion, about the houses and Missions, but I did not find its nest.

Tyrannula nigricans, Swains. Black Pewee.

This bird is abundant in California, and like our common Pewee is particularly fond of being near the habitations of man: with the utmost confidence, it is seen familiarly flying about the corals and gardens, and even the very doors; over which, on a projecting beam, about the middle of April, I found its nest. It was large for the size of the bird, and consisted of a solid round mason work

of clay, intermixed with fibres of grass, &c., and lined with a thin layer of softer materials, blades of grass, fine strips of bark from the neighboring vineyard, and horsehair, and contained four eggs. This was the second nest which had been built that year; the first near the same place having been destroyed by the occupant of the house, this was commenced still nearer the door. I was informed that it was difficult to get them to leave the place they had once selected for their nest, and that if it were torn down they would at once commence forming another. The previous year three successive nests had been destroyed. These birds are constant residents; and, as well as near the towns, are also distributed over the whole country, either in the margins of woods, or bushy plains, and almost always in pairs. They are very pugnacious, and are often seen fighting together in the air, and darting after each other from branch to branch, at the same time uttering their peculiar loud and angry *tship*, which can always be recognized. From the arrangement of its colors, at a little distance, when sitting with their breasts towards you, they are easily mistaken for Snow birds.

Tyrannus borealis, Swains. Olive-sided Flycatcher.

T. Cooperii, Nutt.

I found this species scatteringly in the Rocky Mountains: it is quite abundant in the Pine woods of Upper California, for which it appears to have a great partiality. In the latter part of July I killed the young, not yet fully fledged, in the pines near Monterey, where they must have bred.

Tyrannus verticalis, Say. Arkansas Flycatcher.

This tyrant is an abundant resident in California. Around the Pueblo de los Angeles it takes possession of the hedges of the vineyards, orchards and gardens; noisy, pugnacious, and ever on the alert, it suffers no intrusion upon its dominions; Hawk, Raven, or Crow, not even its own species, are allowed to pass unmolested. For this reason it has acquired the name of *Correcuerbo* (Crow-chaser) by the inhabitants, who also gladly allow them full possession.

Tyrannus crinitus?

A large species of Flycatcher, very much resembling the Great Crested, is not uncommon in California. My friend S. F. Baird, of Carlisle, Pa., is in possession of a specimen, and considering it distinct, it will soon be published in a paper he has prepared, upon the North American birds of this family. Near Monterey I have heard it uttering the *payup* note of the Great Crested, and at Santa Barbara they were breeding in the knot holes of the evergreen oaks in May.

Ptilogonys Townsendii, Aud. Townsend's Ptilogonys.

This rare bird I frequently found in the Rocky Mountains of the interior of California. See Proceedings of the Academy for April, 1843.

Icteria viridis, Gmel. Yellow-breasted Chat.

The Chat arrives in California about the middle of April, and resorts to the hedges of vineyards, gardens and bushy places, where no doubt it breeds.

It is very extensively distributed on our continent, as I observed it also common along the coast of Peru.

Vireo solitarius, Vieill. Solitary Vireo.

During the latter part of summer and winter, the young birds of this species are abundant, frequenting low bushes and thickets, in small flocks.

Descriptions of New Species of Coleoptera of the United States.

By F. E. MELSHEIMER, M. D.

(Continued from Vol. 3, page 66.)

Crioceridæ, Leach.

DONACIA, Fabr.

1. *D. cuprea*. Cupreous above; antennæ and feet testaceous, the former with the third joint longer than the second; the latter with the posterior femora brown at tip. 3—3½ l. long. Pennsylvania.

Cupreous, tinged with bluish above: head sparsely greenish-ashy-pubescent, densely and very minutely rugose, with the frontal groove most frequently profound, sometimes obsolete; mouth, palpi and antennæ, testaceous, the latter with the third joint distinctly longer than the second; mandibles black: thorax subquadrate, hardly as long as wide, narrower behind than before; obsolete and very distantly punctulate on the disk; confluent and very minutely rugose; a small oblong tubercle behind each anterior angle; medial line indistinct, sometimes wanting; basal margin rather transversely indented: elytra punctate-striate, the interstices densely and minutely rugose, with two obtuse and rather obsolete subsutural impressions; humeral angles polished, almost impunctured; apex obliquely truncate; beneath and sides of the head, dull silvery sericeous: feet dull testaceous, with the posterior femora in particular, brown at the posterior half, and obtusely toothed towards the tip.

Var. a. Elytra golden-yellow.

2. *D. indica*. Black above; antennæ, tibiæ and tarsi dull rufous; thorax quadri-tuberculate; elytra broad, rounded at apex. 4 l. long; 1½ l. wide. Pennsylvania.

Donacia indica, Melsh. Catal.

Black, glossy above: head with a slight bluish tinge, densely rugose-punctulate; frontal impressed line short, distinct; antennæ short, dull rufous, with the basal joint entirely, and the apical half of the remaining joints, brown or black; second joint almost as long as the third; mouth brownish-piceous: thorax distinctly longer than wide, not half as wide as the elytra, wider at apex than at base; above finely confluent rugose; four small, obtuse, polished tubercles before the middle, placed in a transverse arcuated row, the two posterior or middle ones small, only distinctly seen from an above view; medial impressed line fine, and not profound; anterior angles raised: scutellum ashy-brown-pubescent: elytra wide, comparatively short, transversely rugulose, punctate-striate, with the apex decurved and rounded; an obsolete subsutural depression:

beneath dusky silvery-sericeous, with the abdomen, as is common, pale or reddish brown; femora, excepting at base, blackish; base of femora, tibiæ and tarsi dull rufous; posterior femora hardly toothed at tip. This is a very rare species.

"*D. metallica*. Cupreous; antennæ and feet rufous; second and third joints of the former equal." Say, Journ. Acad. Nat. Sc., v. 283, 2.

Var. c. Blue; antennæ and feet as in the type.

3. *D. bimpressa*. Cyaneous; thorax with an orbiculate impression each side of the middle; elytra finely striate-punctate. 8 l. long; 1 l. wide. Pennsylvania.

Cyaneous, with a violaceous or greenish reflection, shining: head dull silvery-sericeous, confluent rugose-punctulate, with the frontal line profoundly impressed; antennæ moderately long, brown, with the base of the joints more or less dull rufous; second joint rather shorter than the third; mouth and palpi brownish: thorax longer than wide, wider at apex than at base; above tinted with greenish, finely, deeply and distantly punctured; medial line fine, more deeply impressed before the middle than towards the base; a small, suborbiculate, profound impression each side and near the middle; lateral tubercle moderate, oblong; anterior angles slightly tuberculate: scutellum dull violaceous, minutely and densely punctured: elytra faintly tinted with violaceous, finely transversely wrinkled, finely striate-punctulate, sutural region obtusely indented in two or three places; an oblique, rather obsolete, indentation from the humeral angles to the suture; apex obliquely truncate, almost rounded: beneath blackish, densely punctulate, dull silvery-sericeous; femora blackish or dark brown, with their base, tibiæ and tarsi, dull dark rufous; hind pair of femora with an obvious tooth towards the tip. This species is also very rare.

Var. a. Elytra violaceous, sculpture rather stronger than in the type; thorax darker than the elytra, with the two dorsal impressions shallow and somewhat obscure; bases of the antennal joints more obviously rufous than in the type. *Donacea violacea*. Melsh. MS.

4. *D. aurichalcea*. Brassy-yellow, shining; antennæ with the third joint somewhat longer than the second; thorax distantly punctulate; femora brassy-brown. 3 l. long; 1 l. wide. Pennsylvania.

Donacea aurichalcea, Melsh. MS.

Brassy-yellow, shining: head, color and sculpture as in the preceding species; antennæ moderately long, dull rufous, with the tips of the joints black; two basal joints almost black-brassy; second joint one-fourth shorter than the third: thorax longer than wide, wider at apex than at base; above distantly punctulate, with the medial line fine, rather obsolete; lateral tubercle moderate, oblong; anterior angles slightly tuberculate: scutellum ashy-pubescent, minutely and densely punctured: elytra, apart of the color, entirely as in the preceding species: beneath dull silvery-sericeous; femora brassy-brown, shining, with the hind pair obviously toothed towards the tip; base of the femora, tibiæ and tarsi, dull rufous. Though the present species is destitute of the two thoracic impressions, so conspicuous in *bimpressa*, it may nevertheless, perhaps, be a variety, if not the type, of that species.

6. *D. rutila*. Brassy yellow, shining; antennæ testaceous, with the third

joint longer than the second; thorax longer than wide, densely and very finely wrinkled. $3\frac{1}{2}$ l. long; $1\frac{1}{2}$ l. wide.

Brassy-yellow, tinted with golden: head brassy-brown, opaque, confluent rugosely punctulate, with the frontal line long, deeply impressed; labrum, palpi and antennæ rufo-testaceous; the first shining, impunctured; the last moderately long, slender, with the third joint distinctly longer than the second: thorax somewhat unequal, dull cupreous, longer than wide, wider at apex than at base, densely and finely rugose, with scattered impressed punctures; medial line distinct, deeply impressed before and behind the middle; lateral tubercle moderate, oblong, obtuse; anterior angles slightly tuberculate: scutellum plumbeous-sericeous, densely and minutely punctured; elytra strongly tinted with golden, and with a faint violaceous reflection, punctate-striate, transversely rugose; the ordinary humeral and subsutural depressions faint; truncate at apex: beneath dull silvery-sericeous; terminal abdominal segments rufous; femora brassy-brown, with their basal third, tibiæ and tarsi, dull rufous; hind femora not toothed. Inhabits Pennsylvania.

6. *D. nana*. Brassy-yellow, tinted with green; antennæ rufous, second and third joints subequal; thorax longer than wide; medial line profoundly impressed. 2 l. long; $\frac{2}{3}$ l. wide. Pennsylvania.

Head dull brassy-green, densely rugose-punctulate, equal, with the frontal impressed line distinct; mouth rufo-piceous; antennæ ordinarily long, dark, dull rufous, with their tips blackish; basal joint brassy-brown, with the second joint hardly as long as the third: thorax decidedly longer than wide, obviously narrower at base than at apex; cupreous, finely rugose, with the disk polished and shining; medial line entire, wide and profound; basal margin transversely impressed; lateral tubercle obtuse, slightly oblong; anterior angles very feebly tuberculate; middle of anterior margin ordinarily elevated: scutellum plumbeous-sericeous; elytra rather convex, brassy-yellow, strongly tinted with green, finely wrinkled, striate-punctate; two slight, obtuse subsutural depressions; apex rounded: beneath plumbeous-sericeous or brassy-brown; feet brassy-brown, glossy, with the bases of the femora and tibiæ, dull rufous; hind pair of femora toothed. This species must be closely allied to *pusilla*, Say, but it differs from that species, according to Say's description, in having the thorax decidedly less punctured than the head, and its middle profoundly grooved.

"*D. quadricollis*. Brassy-green; thorax with the impressed line and lateral tubercle, obsolete." Say, Journ. Acad. Nat. Sc. v. 282, 1.

Var. a. Dull violaceous.

ORSODACNA, Latr.

"*O. vittata*. Black, punctured; elytra pale testaceous; suture and outer margin black; feet rufous." Say, Jour. Acad. iii. 430.

Var. b. Entirely black. *Donacia atra*, Melsh. Catal.

O. tricolor. Head, thorax and feet rufous; elytra testaceous, with the suture and lateral submargin black. 3—4 l. long. Pennsylvania.

Head rufous, with the vertex indeterminately black; rugosely punctured; clypeus sparsely punctured; labrum impunctured; antennæ blackish, with 3 basal joints obsoletely rufous; joints 2—4th subequal; palpi and mandibles rufous, the latter with the tips black; eyes black: thorax slightly longer than

wide, wider before the middle than at base, with the sides rounded from the posterior contraction to the anterior angles, which are also rounded : scutellum dull rufous : elytra testaceous, with the suture broadly black before the middle, and gradually narrowed to the suture towards the apex ; a broad similarly colored submarginal vitta, which attains neither the lateral edge nor the apex, towards which it is narrowed to a point ; deeply and densely punctured ; two very narrow, longitudinal, almost impunctured lines in the middle : postpectus dusky ; abdomen, antepectus and femora, yellowish rufous ; apical two-thirds of the tibiae, tarsi and posterior margins of abdominal segments, dusky or black.

Var. a. Black, with the thorax dusky rufous.

"*O. Armenaca*, Knoch : punctate, black, feet fulvous, elytra with a testaceous vitta. Form and size of *O. Cerasi*.' Germar Insect. Sp. Novæ, p. 526.

Var. a. Head and thorax dull rufous, the former with the vertex blackish ; elytra testaceous, with the suture broadly reddish brown, a similarly colored submarginal vitta ; beneath reddish-brown ; feet paler.

Var. b. Black, with the anterior part of the head and feet yellowish-testaceous ; a broad spot at base, and an abbreviated apical vitta at the suture, pale testaceous. *Donacia 4-notata*, Melsh. Catal.

Var. c. Entirely black.

Hispidæ, Kirby.

MICRORHOPALA, Chev.

M. porcata. Black ; elytra with three raised lines, and three double and one triple series of profound punctures. $1\frac{1}{3}$ —1 l. long.

Hispa porcata and *minuta*, Melsh. Catal.

Black ; head with three longitudinal impressed lines ; antennæ blackish, with a tinge of reddish brown : thorax rough, with large dilated punctures, sometimes with a narrow impunctured medial line : elytra each with three longitudinal raised lines, and three double and one triple series of profound subquadrate punctures ; sometimes a more or less obsolete raised line between the second and third lines, widely interrupted in the middle ; sutural edges raised ; exterior edges entire ; apex rounded : beneath black ; feet dull dark chestnut brown.

Galerucidæ, Steph.

GALERUCA, Geoffr.

G. femoralis. Black ; thorax, elytra, tibiae and tarsi rufous or rufo-testaceous. $2\frac{1}{4}$ l. long.

Galeruca thoracica, Melsh. Catal.

Head black, rugosely punctulate, with a polished transverse raised line between the eyes, interrupted in the middle by a distinct impressed medial line ; antennæ — ; labrum black, entire, rounded at apex : mandibles dull testaceous, dusky at tip ; palpi blackish, dull testaceous at tip ; thorax rufo-testaceous, transverse, with the sides acutely rounded in the middle ; above with large profound, scattered punctures ; each side of the middle with a wide dusky indentation ; medial groove obvious behind the anterior margin and before the posterior one, dusky like the two indentations ; scutellum blackish or piceous-

brown; elytra color of the thorax, widest behind the middle, rather numerous and deeply punctured, and like the thorax glabrous; beneath and femora, black; pleuræ, epipleuræ, tibiæ and tarsi, testaceous. Very rare.

"*G. atripennis*. Black; thorax rufous, with two impressed spots; venter pale yellowish rufous." Say, Journ. Acad. Nat. Sc. iii. 461.

Var. a. Testaceous; antennæ and eyes black; scutellum, tibiæ and tarsi, dusky. *Galeruca paleacea*, Melsh. MS. Referable to the genus *Luperus*, Geoffr.

CALOMICRUS, Dillwyn.

C. thoracicus. Black; thorax and feet testaceous-yellow. 2 l. long. Pennsylvania.

Crioceris thoracica, Melsh. Catal.

Head deep black, with the clypeus dusky-piceous; very minutely punctured; a short longitudinal impressed line between the eyes, interrupted by a short transverse one; antennæ black or dark brown, more than half the length of the body, with the joints elongated; second and third joints shortest, equal; palpi black, piceous, with the tips dusky; labium and gula, testaceous; thorax transverse, testaceous-yellow, hardly punctulate, with the sides obtusely rounded; anterior edge truncate; posterior one obtusely rounded; an obtuse indentation each side of the middle, very faintly defined: scutel black; elytra oblong, with the sides parallel; deep black, shining, glabrous, obsolete rugulose and punctured, punctures minute and distant; apex rounded; postpectus and abdomen, black; antepectus and feet, testaceous-yellow.

ÆDIONYCHIS, Latr.

1. *Æ. fallax*. Black; thorax with the limb, and elytra with the lateral margins and a broad vitta, red. 2—2½ l. long; 1½—1½ l. wide. Pennsylvania.

Short-ovate, black, densely punctured: head very dark dull red, almost black, coarsely punctured, with a longitudinal impressed line between the antennæ, which are short, black, with the fourth joint slightly longest: thorax finely wrinkled, and somewhat distantly punctulate, with the limb red; and the disk transversely brown or dull reddish brown: scutel black, finely rugose-punctured: elytra rugulose, and with numerous small, profound punctures; black, each elytrum with the lateral margin and a broad medial vitta, red, margin and vitta united at tip: beneath and feet, black-piceous; pleuræ and epipleuræ, red; posterior femora much incrassated. It may be necessary to add to the foregoing description that the red color soon after death changes into a dirty testaceous, and that, most frequently, there is an indentation, more or less obvious, each side of the middle behind the anterior margin of the thorax. This species must be closely allied to *miniata*, Fabr.

2. *Æ. limbalis*. Brown-piceous; basal joints of the antennæ, lateral margins and apex of the elytra, and the two anterior pairs of feet, dull testaceous. 1½—2. l. long. Pennsylvania.

Flat, ovate, brown-piceous: head with a few minute scattered punctures; a profound transverse impressed line between the eyes, intersected in the middle by an obsolete longitudinal one; eyes deep black; antennæ fuscous, with the six first joints dull testaceous; palpi and two anterior pairs of feet, dull tes-

taceous: thorax impunctured, with the lateral margins clearer than the disk, and rather broadly depressed: scutellum impunctured: elytra punctured, punctures numerous, small, profound, and rather regular and equidistant: lateral margins and apex indeterminate and broadly dull testaceous: beneath brown or blackish-piceous; pleuræ and epipleuræ, dull testaceous; posterior femora rufo-piceous. Closely allied to *quercata*, Fabr., which it much resembles; that species, however, has the thorax always testaceous, and the testaceous color of the lateral margins of the elytra is ever clearly limited, which is never the case in *limbalis*.

2. *Æ. scalaris*. Testaceous; three common fasciæ of the elytra black.

21. long. Pennsylvania.

Attica nitidula, Melsh. Catal.

" *scalaris* " MS.

Flatfish, oval, testaceous above; head testaceous, sculptured as in the preceding species; eyes deep black; antennæ fuscous, with three basal joints testaceous; palpi, feet and antepectus, testaceous; thorax impunctured with the lateral margins rather broad and concave: scutellum black-piceous: elytra punctured and rugulose, punctures minute and obsolete; three common, broad irregular, black fasciæ, confluent on the suture, and of which none attains the lateral edges: the front and broadest band is located immediately behind the basal edge, the intermediate and longest one on the middle, and the posterior and rather shortest band is placed before the apex: abdomen and postpectus reddish-brown-piceous: posterior femora strongly incrassated. Closely allied to *sezmaculata*, Illig.

PACHYONYCHUS, Chevr.

P. ? paradoxus. Pale rufous: lateral two-thirds of the elytra and antennæ blackish. $1\frac{1}{2}$ — $1\frac{3}{4}$ l. long. Pennsylvania.

Form altogether that of a *Lema*, Fabr. Head with a few minute scattered punctures: a short impressed cross between the eyes; antennæ rather robust, and somewhat more than half the length of the body, blackish or dark reddish-brown, with three basal joints rufous: second and third joints short, subequal, together not much longer than the fourth: palpi color of the head: thorax like the head, pale rufous, glossy, transverse, much narrower than the elytra, truncate before and behind, with the sides feebly rounded, towards the hind angles more strongly: finely margined: angles, each with a small mammiform tubercle, from each of which arises a single hair: sparsely punctured: transverse basal groove entire, punctured: scutellum color of the thorax, impunctured: elytra oblong-quadrate, with the apex rounded: punctate-striate: interstices minutely and distantly punctured: black, or dark-reddish-brown, with the sutural third rufous: sometimes the apex the same: beneath and feet color of the thorax: posterior femora ordinarily incrassated: penultimate tarsal joint strongly bilobed: posterior nails inflated.

DIBONYCHA, Chevr.

D. abbreviata. Pale fulvous: eyes, antennæ, three elytral vittæ, exterior edge of the tibiæ and tarsi black. $3\frac{1}{4}$ l. long: $1\frac{3}{4}$ l. wide. Pennsylvania.

Ovate, testaceous, tinged with fulvous: head with scattered minute punc-

tures: three profound round impressions between the eyes placed triangularly: antennæ robust, half the length of the body, black, with the basal joint rufous: mandibles with the tips black; thorax impunctured, each side of the middle with a small, round indentation; scutellum impunctured: elytra distinctly widest behind the middle: much, finely, and profoundly punctured: each elytrum with a broad vitta, and a common sutural one, black, bands equidistantly abbreviated before the apex: feet color of the body: outer edge of the tibiæ blackish: tarsi dusky: posterior femora moderately incrassated: claws simple.

GRAPTODERA, Chevr.

G. kalmiæ. Golden-cupreous above: antennæ and beneath black. $1\frac{1}{2}$ l. long. Pennsylvania.

Attica Kalmiæ, Melsh. MS.

Oblong: head golden-green, polished, hardly punctulate: eyes palpi and antennæ, deep black, the last with the two first joints metallic: mouth piceous: thorax color of the head, highly polished: disk impunctured: transverse basal groove profound, entire: scutellum small, black-cupreous: elytra golden cupreous, shining, punctured, punctures placed in irregular series, and rather obsolete towards the apex; beneath dark-cupreous: tibiæ and tarsi fuscous: femora cupreous, glossy, the anterior pair almost black.

Var. a. Head and thorax color of the elytra, with the abdomen black-cupreous. *Attica cuprea*, Melsh. Catal. This species is found on the Laurel, (*Kalmia latifolia* and *glauca*) and other plants.

SYSTEMA, Chevr.

S. blanda. Testaceous: beneath and antennæ black: elytra with a sutural vitta and lateral margins, reddish-brown. 1 l. long. Pennsylvania.

Elongate; head dull rufous, glossy, a few punctures near and between the eyes; labrum, eyes and last joint of the palpi, deep black; antennæ slender, nearly half the length of the body, blackish or brown, with the base of the first joint testaceous; thorax pale testaceous, with the lateral margins more or less blackish or dusky; sides slightly rounded; surface with a few obsolete punctures; scutellum reddish-brown piceous; elytra minutely and rather distantly punctured; testaceous, with a common sutural vitta and a lateral one, reddish-brown, more or less obvious; beneath black-piceous; pleuræ, epipleuræ and feet, dull testaceous.

CREPIDODERA, Chevr.

1. *C. violacea*. Dark violaceous above; antennæ, palpi and feet, yellow-testaceous. 1 l. long. Pennsylvania.

Altica Du Chou, Melsh. Catal.

Oval, violaceous, with a green reflection, shining; head impunctured, very glossy, with the clypeus and inner margins of the eyes green: antennæ half the length of the body, yellowish; labrum, mouth, palpi and feet, color of the antennæ; thorax transverse-quadrate, with the sides feebly rounded; above very minutely and remotely punctured; a distinct transverse basal groove, refracted at each end; scutellum dark violaceous; elytra striate-punctate; beneath black; posterior femora brown-piceous. Not the *Altise Du Chou*.

Var. a. Above purple-violaceous. Sometimes this variety has the face entirely green, the thorax rather rugulose, and the lateral margin green.

Var. b. Like the type, but with large and remote punctures on the thorax.

Var. c. Smaller than the type, brilliant brassy; head brassy-green, shining; thorax with large remote punctures, edges green; elytra indented behind the base towards the suture; lateral edges green; antennæ, feet and beneath, as in the type; posterior femora slightly dusky in the middle.

Altica opima, Melsh. MS. This may prove to be a distinct species. *C. violacea* resembles *H. nana*, Say, but that species is more slender, and the sides of the elytra more parallel.

2. *C. erythropus*. Black; head, antennæ, thorax and feet, rufous. $1\frac{1}{2}$ l. long. Pennsylvania.

Altica rufipes, Melsh. Catal.

" *erythropus* " MS.

Oblong-subquadrate: head rufous, glossy, impunctured; antennæ and thorax color of the head; eyes blackish; thorax rather convex, glossy, impunctured; sides slightly rounded; base with a transverse groove, refracted at the ends; scutellum rufous; elytra black, punctate-striate, the interstices slightly convex; abdomen black: antepectus and feet rufous; epipleuræ dull rufous.

3. *C. fusco-cænea*. Dark brown brassy; antennæ and feet rufous; thorax with an entire basal groove. $1\frac{1}{2}$ l. long. Pennsylvania.

Oblong, brassy brown or blackish, glossy; head impunctured; labrum piceous; palpi dull rufous; antennæ rufous, with the second and third joints subequal; thorax narrower than the elytra, moderately convex, with sides slightly rounded; impunctured, each side of the middle a small obsolete indentation; transverse basal groove entire; elytra finely and distantly punctured; sides obtusely arcuated, with the greatest width about the middle; beneath black, or dark brown, glossy; feet rufous; posterior femora sometimes rufo-piceous.

4. *C. hirtipennis*. Black; head and thorax rufous; elytra testaceous, hirsute, punctate-striate. $\frac{3}{4}$ l. long. Pennsylvania.

Head rufous, minutely and obscurely punctured; eyes black; antennæ testaceous, with the second, third and fourth joints short, subequal, the second thickened; palpi black; thorax rufous, transverse, moderately convex, with the sides feebly rounded; densely punctulate; transverse basal groove slight, entire; elytra dull testaceous, moderately convex; sides slightly arcuated; deeply punctate striate, punctures furnishing short, whitish setæ, frequently with a common, obsolete, dusky fascia on the middle; abdomen and postpectus blackish; antepectus and feet, pale rufous; posterior femora sometimes dusky.

5. *C. atriventris*. Dull rufous; abdomen and postpectus blackish; elytra striate-punctate. $\frac{1}{2}$ l. long. Pennsylvania.

Short-ovate, dull rufous, glossy; head impunctured; palpi with the last joint dusky; antennæ slender, testaceous; eyes black; thorax short transverse, narrower than the elytra, with the sides feebly rounded; moderately convex; very minutely punctured; transverse groove profound, refracted at both ends; elytra convex, striate-punctate; punctures obsolete towards the apex; sides arcuated; beneath blackish, or dark reddish brown; feet testaceous.

PSYLLIODES, Latr.

P. punctulata. Brassy black; thorax much and finely punctured; elytra striate-punctate; tibiæ and tarsi pale brown. 1 l. long. Pennsylvania.

Form of *striolata*, Illig. Brassy black; head impunctured, rather opaque; palpi dull testaceous; antennæ slender, fuscous, the three basal joints testaceous; 10-jointed; thorax slightly wider at base than at apex, with the sides feebly rounded; finely and rather densely punctured; scutellum minute; elytra narrowed behind and before, striate-punctate, the punctures small; beneath and femora, blackish-piceous; tibiæ and tarsi, dull pale brown, the former dusky towards their tips; posterior femora much incrassated; posterior tarsi inserted before the apex of the tibiæ.

APHTHONA, Chevz.

A. rubicunda. Ferruginous; eyes and suture of the elytra blackish. 1 l. long. Pennsylvania.

Altica rubicunda, Melsh. Catal.

Oblong, ferruginous; head impunctured, glossy, darker than the thorax, labrum piceous; palpi black; eyes blackish; antennæ color of the thorax, four or five terminal joints dusky; thorax narrower than the elytra, transverse-quadrate, with the sides feebly rounded; minutely and distantly punctured; each side of the middle with a small, obsolete, subbasal indentation; scutellum piceous; elytra rather convex with the sides arcuated; rugulose, minutely and distantly punctured, with the punctures rather equidistant; suture indeterminately blackish; beneath and feet, color of the elytra and thorax; posterior tarsi —. Perhaps referable to the genus *Thyamis*, Stephens.

THYAMIS, Steph.

1. *T. melanura*. Fuscous; basal joints of the antennæ and four anterior feet, dull testaceous. $1\frac{1}{4}$ l. long. Pennsylvania.

Altica melanura, Melsh. Catal.

Oblong-subovate, dull reddish-brown, glossy; head impunctured, pitchy-blackish, tinged with rufous; palpi and eyes black, the first piceous; antennæ fuscous, with the three first joints testaceous or dull rufous; thorax narrower than the elytra, transverse-subquadrate, the sides slightly rounded; minutely rugose: scutellum piceous; elytra finely and distantly punctured and rugulose; rather convex, with the sides hardly arcuated except behind the middle; beneath blackish or dark reddish-brown; four anterior feet testaceous; posterior femora pitchy-brown, with their tarsi dull testaceous, their tibiæ sometimes of the same color; first joint of the posterior tarsi half the length of the tibiæ.

2. *T. testacea*. Testaceous; beneath dull pale reddish-brown; antennæ long. $\frac{2}{3}$ l. long.

Ovate, above testaceous; head impunctured, shining; eyes and terminal joint of the palpi, black; labrum piceous; antennæ long, slender, testaceous, with the terminal joints dusky; second and third joints, as in the preceding species, almost equal; thorax narrower than the elytra, subquadrate, with the sides slightly, and basal edge obtusely, rounded; very minutely punctured; scutellum, color of the elytra, which are rather paler than the thorax; rugulose, finely and distantly punctured; sides arcuated; moderately convex; beneath dull reddish-

brown; feet pale testaceous; posterior tibiæ very slender; posterior tarsi half the length of their tibiæ. Found in Pennsylvania.

DRIBOLIA, Latr.

D. ærea. Green above; antennæ, tibiæ and tarsi, testaceous. $1\frac{1}{2}$ l. long. Pennsylvania.

Altica ærea, Melsh. Catal.

Oblong-ovate, green and slightly brassy above, shining; head retracted; labrum, mouth, palpi and antennæ, testaceous, or rufo-testaceous; thorax obsoletely and distinctly punctulate; sometimes almost blackish: elytra finely striate-punctate, with the punctures obsolete towards the apex: beneath and posterior femora, black, shining; abdomen sometimes reddish-brown; four anterior feet testaceous, or rufo-testaceous, their femora sometimes dusky; posterior tibiæ and tarsi color of the anterior one.

CHÆTOCHEMA, Steph.

1. *C. minuta*. Brassy-black above; basal joints of the antennæ tawny-testaceous; elytra punctate-striate. $\frac{3}{4}$ l. long. Pennsylvania.

Altica minuta, Melsh. MS.

Ovate, brassy-black above, shining: head minutely and confertly punctured; rather opaque; labrum and palpi, black, glossy; antennæ short, dark fuscous, with two or three, and sometimes four basal joints dull or tawny-testaceous; thorax very minutely and rather distinctly punctured; transverse, convex, with the sides and base obtusely rounded: elytra convex, with the sides arcuated; strongly punctate-striate; exterior interstices convex: beneath blackish, slightly brassy, distinctly and remotely punctured; femora brassy-black; tibiæ and tarsi dull or dusky testaceous, sometimes the apical half the tibiæ blackish.

2. *C. semichalcea*. Head and thorax brassy-black; elytra black, punctate-striate; basal joints of the antennæ, tibiæ and tarsi, dull testaceous. $\frac{3}{4}$ l. long. Pennsylvania.

Ovate, glossy: head brassy-black, with a few, small, scattered punctures between and near the eyes; labrum and palpi, dark dull reddish-brown; antennæ fuscous, with four basal joints testaceous; thorax brassy-brown or blackish, transverse, moderately convex, with the base obtusely rounded; the sides almost straight; finely wrinkled, and rather densely punctulate; elytra black, punctate-striate; the exterior interstices convex; sides arcuated; moderately convex; beneath black, with the apical segments of the abdomen rugose-punctured; femora blackish or dark reddish-brown, glossy; tibiæ and tarsi, dull testaceous.

3. *C. pulicaria*. Head and thorax brassy-black; elytra black, with a green tinge, punctate-striate; basal joints of the antennæ, tibiæ and tarsi, testaceous. $\frac{3}{2}$ l. long. Pennsylvania.

Altica pulicaria, Melsh. Catal.

Ovate; head brassy-black, hardly punctulate, opaque; labrum and palpi, dull rufo-testaceous; antennæ rather long, slender, fuscous, with four basal joints testaceous; thorax color of the head, transverse, with the sides slightly rounded; moderately convex, scarcely punctulate; elytra black,

tinted with green; moderately convex; punctate-striate; outer interstices convex; sides arcuated; beneath blackish, sparsely punctured; femora chestnut-brown; tibiæ and tarsi, dull testaceous or rufous.

SPHÆRODERMA, Steph.

S. ? insolita. Rust-red, shining; tip and basal joints of the antennæ, testaceous; thorax narrow: elytra broad. $\frac{3}{4}$ l. long. Pennsylvania.

Light ferruginous shining; head impunctured; tips of the palpi black; antennæ moderate, slightly thickened towards the apex, with the two apical joints testaceous, the four preceding black, and the five basal ones testaceous; second, third and fourth joints short, subequal, the second thickened; thorax much narrower than the elytra, transverse, convex, with the base and sides obtusely rounded; impunctured and highly polished: elytra broad, subquadrate, convex, highly polished, with effaced series of very minute punctures; humeral angles prominent: beneath color of the elytra; feet paler; posterior femora moderately incrassated; posterior tibiæ simple, with a small spur at tip; penultimate tarsal joint strongly bilobed. This insect possesses entirely the form of a *Eumolpus* and though a true *Haltica* Geoffr., it cannot remain in the subgenus *Sphæroderma*, Steph.

Chrysomelidæ, Leach.

METACHROMA, Chev.

1. *M. thoracicus*. Dull rufous; elytra black, punctate-striate. 1 2-5ths l. long. Pennsylvania.

Eumolpus thoracicus, Melsh. Catal.

Dull dark rufous: head finely punctured; a longitudinal impressed frontal line, not crossing a transverse line between the eyes, both lines sometimes obsolete; palpi and antennæ paler than the head, the last with the five terminal joints subequal, larger than the preceding ones; eyes black: thorax glossy, minutely and distinctly punctured; an obsolete indentation each side towards the posterior angles; scutellum rufous, impunctured; elytra black, tinted with rufous, particularly towards the apex; punctate-striate, less deeply towards the apex; humeral tubercles impunctured: beneath dusky rufous; feet paler. Closely allied to *canellus*, Fabr.

Var. a. Rufous; elytra slightly tinted with black.

2. *M. melanura*. Black; head, antennæ, apex of the elytra and tarsi, dull rufous. 1 3-5ths l. long. Pennsylvania.

Eumolpus melanura, Melsh. MS.

Black: head dull rufous, densely punctulate; longitudinal impressed line obsolete, transverse line between the eyes angulate, distinct; mouth, palpi and antennæ, rufous, the last formed as in the preceding species; thorax black, with the anterior edge obsoletely piceous; glossy, very finely and distantly punctured; scutellum dull rufous, impunctured: elytra black, with the basal edge, humeral tubercles and apical third, dull pale rufous; punctate-striate, punctures and striæ obsolete or almost absent towards the apex; beneath, femora and tibiæ, deep black; knees and tarsi, dull rufous. Size and form entirely of *4-notata*, Say, of which it may prove a variety.

EUMOLPUS, Fabr.

1. *E. longipes*. Fuscous, clothed with a dense ashy-pubescence; feet long, 2 l. long. Pennsylvania.

Brown, densely ashy-pubescent; head dark brown, densely and deeply punctured, ashy-pubescent; a longitudinal impressed frontal line: labrum piceous: antennæ slender, long, rather filiform, fuscous, with three or four basal joints testaceous; eyes deep black; palpi dull testaceous: thorax longer than wide, much narrower than the elytra, slightly wider behind than before, subcylindric, with the sides obtusely rounded; densely and profoundly punctured: scutellum small, densely ashy-pubescent: elytra with shallow punctured striæ, punctures close-set; interstices transversely wrinkled, minutely punctured: outer basal angles prominent; apex rounded; beneath and feet blackish-brown, ashy-sericeous or finely ashy-pubescent; the feet more than ordinary long; posterior and intermediate femora at base, testaceous.

2. *E. villosulus*. Ferruginous, pubescent; antennæ, palpi and feet, testaceous-yellow. $1\frac{3}{4}$ l. long. Pennsylvania.

Eumolpus villosus, Melsh. Catal.

Ferruginous: very minutely and densely rugose, clothed with minute, short hairs, with an obtuse, longitudinal frontal indentation; antennæ as in the preceding species; yellowish; labrum and palpi similarly colored; eyes deep black: thorax transverse, wider at base than at apex, with the sides rounded, middle of anterior edge raised; rugulose and clothed like the head; obtusely indented on the middle of each lateral margin and in front of the scutellum: elytra lighter and less pruinose than the head and thorax; pilose like the thorax, with the hairs more distinct; with fine and somewhat obsolete punctured striæ; interstices fine, convex; exterior basal angles moderately prominent; apex acutely rounded: feet testaceous, or testaceous-yellow. It belongs perhaps to Chevrolat's subgenus *Myochrous*.

Var. ? a. Smaller; head, thorax and elytra light rust-red, the last with a common, indeterminate black spot on the middle. *Eumolpus plagiatu*s, Melsh. MS.

3. *E. pubescens*. Cupreous, sparsely ashy-pubescent; head with a profound frontal indentation. $1\frac{1}{2}$ —2 l. long. Pennsylvania.

Eumolpus pubescens, Melsb. Catal.

Dull cupreous, or brassy-brown, sparsely ashy-pubescent: head densely punctured, with a large, profound indentation on the front; labrum and palpi, black-piceous; eyes and antennæ black, the latter moderately long, with five terminal joints thicker than the preceding ones, which are brassy; second joint robust; joints third till sixth inclusive, equal; thorax transverse, feebly waved behind, with the front slightly advanced in the middle; sides rounded; rather wider behind than before: minutely punctured, densely transversely wrinkled: scutellum obtuse-triangular: elytra wider at base than the thorax, narrowed to the apex, which is rounded; with obscure and irregular series of small punctures; transversely rugulose; humeral tubercles prominent: beneath rugosely punctured: feet dull cupreous, tinted with greenish.

4. *E. curtipennis*. Brassy-brown; elytra short; head with a conspicuous frontal indentation. 1 l. long. Pennsylvania.

Brown-brassy, shining: head finely punctured, with an obvious frontal indentation, anterior to which is a transverse arcuated impressed line: antennæ, eyes, labrum and palpi, as in the preceding species: thorax comparatively large, as wide in the middle as the elytra, contracted and truncate behind, in front rounded and advanced in the middle; sides rounded; minutely punctured and rugulose: scutellum rugulose: elytra short, with the sides feebly arcuated; rugulose, with obsolete series of punctures, which are much effaced towards the apex, the latter rounded: beneath and feet dark-brassy, rugose-punctured. Allied to the preceding species.

CRYPTOCEPHALUS, Geoffr.

1. *C. M. Nigrum*. Black; thorax and elytra testaceous, the former with a black character like the letter M, the latter with an irregular vitta and several spots, black. $1\frac{1}{2}$ l. long. Pennsylvania.

Pachybrachis M. Nigrum? Dej. Catal.

Strongly punctured: head black, with the orbits of the eyes and a spot on the clypeus, testaceous; labrum pale, or piceous; antennæ blackish, with four basal joints testaceous: thorax less strongly punctured than the elytra, testaceous, with a black character, formed like the letter M; edges black: scutellum testaceous, with the lateral margins black: elytra strongly and irregularly punctured, some of the punctures are arranged in irregular series; testaceous, with an irregular, black vitta, abbreviated before the apex; lateral submargins each with three black spots, of which the anterior one is placed on the humerus, the posterior one is confluent with the vitta: beneath deep black; pygidium black, each side with a pale spot: feet blackish, with the femora and tibiæ varied with white. This species may prove to be a variety of the *viduatus*, Fabr.

2. *C. atomarius*. Dark fuscous, speckled with whitish; face white; femora varied with white. $1\frac{1}{2}$ l. long. Pennsylvania.

Cryptocephalus historio, Melsh. Catal.

" *atomarius*, Melsh. MS.

Black, or dark-brown: head punctulate; face white, with the sutures black; antennæ fuscous, with three or four basal joints lurid: thorax densely punctulate, varied with a few dull testaceous spots; anterior edge and an apical medial line similarly colored: scutellum black, with a testaceous spot: elytra irregularly and profoundly punctured, punctures ranged in irregular series; varied with numerous small lurid spots; pygidium immaculate: beneath black: feet black, varied with white.

Var. a. Black; head almost immaculate; labrum and a double spot in front of the antennæ, white; thorax almost immaculate; elytra with only a few small lurid spots; femora at tip whitish. *Cryptocephalus conspersus*, Melsh. Catal. This is probably the female of the preceding species.

3. *C. trinotatus*. Deep black; thorax with the lateral and anterior margins and three spots, sanguineous; front with two similarly colored spots. $1\frac{3}{4}$ —2 l. long. Pennsylvania.

Cryptocephalus trinotatus, Melsh. Catal.

Deep black: head densely punctulate, with two reddish-fulvous spots between the eyes; antennæ and labrum, black: thorax confluent punctured, with the anterior edge, lateral margins, two oblique, dilated, abbreviated lines

at base, and one at apex, reddish-fulvous: scutellum black; elytra immaculate, densely and coarsely punctured: pygidium, beneath and feet, deep black, immaculate, ashy-sericeous.

4. *C. castus*. Deep black; thorax with the lateral margins and two spots at base, fulvous; elytra punctate-striate, each with a testaceous spot at apex. $1\frac{1}{2}$ l. long. Pennsylvania.

Cryptocephalus castus, Melsh. MS.

Deep black: head opaque, impunctured, spotless; labrum and antennæ, deep black, the latter with the first joint shining: thorax impunctured, rather opaque, with the lateral margins and two oblique, dilated, abbreviated lines at base, fulvous: scutellum black: elytra deeply punctate-striate; interstices impunctured, somewhat convex; humeral tubercle small, prominent; suture raised immediately behind the scutellum, each elytrum with a whitish spot at apex; beneath and feet deep black, immaculate; feet shining.

Var. a. Lateral thoracic margins broadly fulvous, without the basal spots.

5. *C. æsculi*. Black, thorax with the lateral margins and an abbreviated line at tip, dull red; elytra varied with white. $1\frac{1}{2}$ l. long. Pennsylvania.

Cryptocephalus æsculi, Melsh. Catal.

Black; head confluent and obscurely punctulate; orbits of the eyes very faintly rufous; labrum white; antennæ dull brown, the basal joints lurid; thorax densely and somewhat coarsely punctured; lateral margins dull red; a longitudinal medial line originating at apex and abbreviated behind the middle, dull fulvous; scutellum black; elytra ordinarily punctured, varied with whitish; basal edge white; pygidium and beneath, deep black, spotless; feet black, with the anterior femora maculate with white.

Var. a. Head, thorax and feet spotless; elytra with the basal edge and a few small spots towards the apex, white; femora immaculate. Perhaps the female.

6. *C. pectoralis*. Ferruginous, maculate with black; pectus black. $1\frac{1}{2}$ l. long. Pennsylvania.

Light ferruginous: head punctulate; face color of the thorax, with a longitudinal black line between the eyes, the latter black; antennæ color of the face; labrum and feet testaceous; thorax punctulate, with about five obsolete black spots: scutellum black: elytra ordinarily punctured, indeterminate maculate with black; striæ black; abdomen ferruginous; pectus black, or dusky; femora with a small brownish spot.

7. *C. hepaticus*. Ferruginous, sometimes sparsely maculate with black; elytra simply and densely punctured. $1-1\frac{1}{2}$ l. long. Pennsylvania.

Cryptocephalus hepaticus, Melsh. Catal.

Robust, pale ferruginous; beneath dusky; head densely punctulate, sometimes faintly clouded with brownish; eyes black; antennæ moderate, color of the head; thorax densely punctured, sometimes obsoletely clouded with black; scutellum piceous; elytra densely punctured, without any of the ordinary longitudinal rugæ or raised lines; sometimes with four or five spots before the tip, and one on the humerus, black; pygidium dusky in the middle; abdomen at tip dull testaceous; feet rufo-testaceous, or testaceous; sometimes with a brown spot.

8. *C. tridens*. Black; antennæ and feet testaceous; head varied with whit; thorax with the lateral margins broadly white, each with a large subquadangular black spot; elytra varied with white. $1\frac{1}{2}$ l. long. Penn.

Cryptocephalus tridens, Melsh. Catal.

Black: head irregularly punctured, varied with white; antennæ and feet testaceous-yellow; labrum white; thorax profoundly and irregularly punctured, with the lateral margins broadly white, each with a large subtrapezoidal blackish spot; scutellum black: elytra deeply and irregularly punctured, some of the punctures, towards the middle and sides, ranged in irregular series, their interstices convex: each elytrum with a cruciform spot and apex, white; pygidium varied with white; epipleuræ and margins of the abdomen, white. Basal edge of the elytra most frequently, and occasionally an abbreviated longitudinal line at the middle of the thoracic apex, white.

9. *C. flavicornis*. Black; antennæ, feet, lateral margins and two basal spots of the thorax, yellowish; elytra, each with two similarly colored spots. $1\frac{1}{4}$ l. long. Pennsylvania.

Black; head profoundly punctured; eyes black, with the superior and anterior edges, and labrum, white; antennæ and feet, testaceous-yellow; thorax profoundly and inequally punctured; lateral margins, lateral third of anterior and posterior edges, and two dilated short basal lines, testaceous, lines, forming junctions at right angles with the inner ends of the colored basal edge; scutellum black: elytra deeply, finely and inequally punctured, towards the lateral margins irregularly punctate-striate; a lateral linear spot a little before the middle and apex, whitish; pygidium each side with a small whitish spot.

10. *C. luteipennis*. Black; elytra luteous, with the lateral and basal edges and suture, black; thorax with the lateral margins and two basal spots. whitish. $1\frac{3}{4}$ l. long. Pennsylvania.

Cryptocephalus fasciatus and *binotatus*, Melsh. Catal.

Robust, black: head sparsely punctulate, with a longitudinal impressed frontal line; clypeus white, a similarly colored transverse spot between the eyes; antennæ fuscous or blackish, with the five first joints and mouth, testaceous-yellow; thorax sparsely, very minutely and obscurely punctured, glossy; lateral margins narrowly, and a spot each side of the middle before the base, testaceous, tinted with yellow; scutellum black; elytra luteous or ochreous, with the suture, lateral and basal edges and humeri, black; behind the middle with a common, arcuated dusky fascia, being sometimes formed of spots, and sometimes entirely wanting; finely punctate-striate; interstices flat, impunctured; pygidium with two small whitish spots at tip; feet black, with the tarsi fuscous; coxæ of anterior feet each with a white spot; a similar spot each side of the anterior margin of postpectus.

11. *C. mutabilis*. Dull rufous; thorax with the anterior and lateral margins white; base, lateral margins and apex, the same, the two former maculate with blackish spots. $2\frac{1}{4}$ l. long. Pennsylvania.

Cryptocephalus nobilis, Melsh. Catal.

Dull rufous, shining; head sparsely punctured and impressed on the front; orbits, clypeus and labrum white; antennæ pale brown, with five basal joints testaceous; thorax very minutely and distinctly punctured, polished, with the

front and side margins whitish, broadly at the anterior angles; edges dusky; scutellum dusky; elytra darker than the thorax, shining, with the basal and lateral margins broadly whitish, the latter abbreviated before the apex, and containing three blackish spots, of which one is located on the humeral tubercle; middle of the base with a large dark reddish spot; apex whitish; punctate-striate; pygidium strongly punctured, with the apex white; beneath blackish, tinted with rufous; two or three apical segments of abdomen and feet rufous. This species varies much, and it is difficult to determine which is the type.

Var. a. As in the preceding; thorax with two oblique, abbreviated whitish basal lines; elytra with the lateral margins not abbreviated, maculate with rufous.

Var. b. Smaller than the type; head black, marked with white as in the type; thorax black, highly polished and scarcely punctulate, with the front and side margins as in the type; a transverse series of four impressed points each side of the middle towards the apex; elytra black, punctate-striate; basal edge, apex and lateral margins, white, inner side of the latter bisinuate; humeral tubercles black; feet as in the type; antennæ color of the feet; beneath black; a large quadrate white spot in the middle at base of the abdomen. *Cryptocephalus charus*, Melsh. MS. The white basal abdominal spot is present in almost every specimen.

12. *C. clathratus*. Black; head, femora and thorax fulvous, the latter with the lateral margins and two basal spots, yellowish; elytra with about sixteen yellowish spots. $1\frac{3}{4}$ l. long. Pennsylvania.

Cryptocephalus clathratus, Melsh. Catal.

Head pale fulvous, scarce punctulate; a slight longitudinal impressed line between the eyes; antennæ fuscous, with the five first joints testaceous; eyes plumbeous; thorax fulvous, with two oblique, dilated, abbreviated yellow basal lines; lateral margins yellow; posterior and lateral edges blackish; surface obscurely punctulate; scutellum piceous; elytra deep black, punctate-striate, with about sixteen yellow spots, placed in four transverse series, spots in the basal series six, all linear, eight spots in the two intermediate series, and two at apex; pygidium strongly and coarsely punctured; beneath dusky, tinted with rufous; a whitish spot on the middle of the abdominal base; femora fulvous; tibiæ and tarsi color of the abdomen.

Var. a. Rufous or fulvous; thorax immaculate; elytra black, with about 10 yellow spots. *Cryptocephalus pulcher*, Melsh. Catal.

13. *C. sulphuripennis*. Black; elytra pale yellow, maculate with black; thorax with the lateral margins and two basal spots, yellowish; feet pale fulvous. 2 l. long. Pennsylvania.

Head black, sparsely punctulate; orbits, labrum and clypeus, whitish; antennæ yellowish, dusky at tip; thorax black, distantly punctulate, with the lateral margins and two oblique basal spots, yellowish; scutellum black; elytra pale yellow, with three transverse rows of small black spots, apical row formed of four spots, and each of the two others six; punctate-striate, punctures dusky; pygidium black, immaculate, coarsely punctured; beneath deep black; feet pale rufous.

14. *C. formosus*. Deep black; thorax with the lateral margins and two

basal spots, fulvous; elytra with thirteen fulvous spots. Nearly 2 l. long. Pennsylvania.

Deep black: head with a longitudinal impressed frontal line; punctulate; maculate with whitish; antennæ blackish, with three or four basal joints yellowish: thorax polished, hardly punctulate, with the anterior and posterior angles, and two oblique basal spots, yellowish; anterior edge similarly colored; elytra profoundly punctate-striate, with thirteen fulvous spots, ranged in transverse rows; two of the spots are at apex, three at base, and in each of the two intermediate rows four; beneath, feet and pygidium, deep black, immaculate; coxæ of the two anterior feet with a white spot; abdominal basal spot present.

15. *C. hamatus*. Black; head, thorax, feet, and lateral and apical margins of the elytra, fulvous; pygidium and tip of the abdomen, similarly colored or rufous. 1 l. long. Pennsylvania.

Head pale fulvous, distantly punctulate; eyes plumbeous, varied with golden; antennæ color of the thorax, dusky at tip; thorax fulvous, varying in depth of color; sometimes with the lateral margins and two oblique basal spots, faintly yellowish; surface densely and minutely punctured; scutellum piceous; elytra black, punctate-striate; lateral and apical margins with a yellowish vitta, curving a little upon the first entire innerspace; base with two short fulvous lines, the one at the suture and the other in the middle; lateral and apical edges, black; basal edge sometimes yellowish: beneath black; feet, tip of the abdomen and pygidium, fulvous; abdominal basal spot present.

16. *C. pretiosus*. Black, shining; head and thorax maculate with white; elytra punctate-striate, with an abbreviated fascia, linear spots at base, and apex, fulvous. 1½ l. long. Pennsylvania. Very rare.

Deep black: head rather strongly punctured; a longitudinal profoundly impressed line between the eyes; orbits and clypeus white; antennæ blackish, with five basal joints testaceous-yellow: thorax highly polished, very minutely and distantly punctured; a spot at each of the angles, and two oblique subovate basal spots, white; elytra finely punctate-striate, with a broad fascia in the middle, somewhat widely interrupted at the suture, apex and six short lines at base, fulvous or yellowish fulvous; exterior basal line or spot confluent with the fascia; pygidium, beneath and feet, deep black; coxæ of the anterior and middle feet each with a white spot; abdominal basal spot present.

MONACHUS, Chev.

M. viridis. Dark green; antennæ, mouth, lateral margins of the thorax and feet yellowish. ¾ l. long. Pennsylvania.

Cryptocephalus smaragdinus, Melsh. MS.

Dark green, slightly brassy; head obscurely and very minutely punctured; a slight frontal impression; clypeus, labrum and mouth, yellowish; antennæ similarly colored, with the tip dusky; as long as the thorax, somewhat thickened towards the tip, with the joints short; thorax transverse, wider at base than at apex, with the sides rounded; truncate before and slightly waved behind; posterior angles acute; surface hardly punctulate, with the lateral margins dull fulvous; elytra shining, finely and obsoletely striate-punctulate; punctures almost wanting toward the apex; feet yellowish-fulvous; pygidium, abdomen,

and postpectus, black, the latter tinted with reddish; antepectus color of the feet.

Var. a. Head and thorax dull rufous.

GASTROPHYSA, Chev.

1. *G. ænea*. Blue, slightly brassy; antennæ black, with five basal joints testaceous. 2 l. long. Pennsylvania.

Eumolpus æneus, Melsh. Catal.

Blue, tinged with greenish, slightly brassy; head deeply and distantly punctulate, sometimes with an obsolete longitudinal frontal impression; antennæ black, with five or six basal joints dull testaceous; palpi piceous; thorax deeply and densely punctulate: scutellum impunctured: elytra much punctulate, with the punctures longer than wide, and ranged in irregular and approximate series; beneath and femora, greenish black, slightly brassy; tibiae and tarsi, blackish, or dark reddish-brown; abdomen sparsely punctulate.

Var. a. Elytra cupreous.

2. *G. cyanea*. Blue; beneath and feet black. 2 l. long. Pennsylvania.

Chrysomela Raphani, Melsh. Catal.

Cyaneous, shining: head punctured; an obsolete longitudinal impressed frontal line; labrum and palpi piceous: antennæ black, or dark brown, with four basal joints glabrous, shining; thorax strongly tinged with green; profoundly and densely punctulate: scutellum green: elytra punctured like the thorax, with a green reflection: beneath blackish; feet similarly colored, with a bluish or greenish reflection.

PHÆDON, Meg.

P. viride. Greenish, or dark fuscous brassy; feet piceous. $1\frac{1}{2}$ l. long. Pennsylvania.

Eumolpus viridis, Melsh. Catal.

Ovate, greenish, or dark fuscous brassy, rarely cupreous; shining; head deeply punctulate, with a transverse, arcuated impressed frontal line: antennæ blackish or dark brown; thorax very minutely and obsoletely punctured; scutellum blackish, impunctured: elytra striate-punctate, punctures small, and the series remote: beneath blackish, with the abdomen densely punctured; feet blackish-piceous, often brassy.

Erotylidæ.

TRITOMA, Fabr.

T. basale. Black; basal half of the elytra rufous. $1\frac{3}{4}$ l. long. Pennsylvania.

Black, shining; head obscurely punctulate; antennæ black; thorax much and rather distinctly punctulate: scutellum piceous: elytra with the basal half rufous: finely punctate striate; beneath black, distantly and distinctly punctulate: feet black. Differs from *pulchrum*, Say, which it much resembles, in being more numerous and distinctly punctulate, and in having the basal half of the elytra transversely rufous, the rufous color extending as far down on the lateral margins as it does on the suture, whilst in *pulchrum* the rufous color occupies only a short space behind the humeri, and extends down the suture, sometimes to the apex.

TRIPLAX, Payk.

T. fasciata. Yellowish; head, antennæ and base and apex of the elytra black. $2\frac{1}{4}$ l. long. Alabama.

Head distinctly and not densely punctulate; black, posteriorly tinted with rufous; antennæ black; palpi, feet and beneath testaceous-yellow; thorax similarly colored; punctured like the head: scutel color of the thorax; elytra broadly black at base and apex, with a broad, common, testaceous-yellow fascia; finely punctate-striate.

Endomychidæ, Leach.

LYCOPERDINA, Latr.

1. *L. 4-guttata*. Black; elytra with four rufous spots; thorax rufous, with the disk black. $1\frac{3}{4}$ l. long. Pennsylvania.

Endomychus 4-guttatus, Melsh. Catal.

Head black, shining, sparsely and obscurely punctulate; labrum and mouth dull fuscous; antennæ black; thorax minutely and obscurely punctured; rufous most frequently with a broad, entire, black dorsal vitta; glossy; edges dusky; scutellum black; elytra similarly colored, each with a large subhumeral spot, and another behind the middle, rufous or fulvous; obscurely punctulate; postpectus, feet and abdomen, blackish, the latter with the tip dull pale brown; tarsi similarly colored; antepectus rufous.

2. *L. lutea*. Testaceous; eyes black. $1\frac{1}{4}$ l. long. Pennsylvania.

Endomychus luteus, Melsh. Catal.

Testaceous, glabrous or rather thinly clothed with minute short hairs, arising from very minute punctures; antennæ darker than the head; eyes black; thorax with the lateral margins pale testaceous, pellucid; femora pale testaceous; tibiae and tarsi darker.

3. *L. pilosa*. Pale ferruginous, finely pubescent. $1\frac{3}{4}$ l. long. Pennsylvania.

Endomychus pilosus, Melsh. Catal.

Palpi ferruginous, yellowish-pubescent; head glossy, indistinctly punctulate, hardly pubescent; eyes black: antennæ color of the head, with the clava darker: thorax indistinctly punctulate, slightly pubescent, glossy, with the lateral margins lighter than the disk: elytra obscurely punctulate, yellowish-pubescent, with the suture sometimes dusky; beneath and feet as above.

This species and the preceding one may be referred to the subgenus *Epi-pocus* of Dejean's Catalogue.

4. *L. crassicornis*. Rufous; disk of the thorax, a fascia and tip of the elytra, black; clava of the antennæ much dilated. $1\frac{1}{2}$ l. long. Pennsylvania.

Endomychus crassicornis, Melsh. Catal.

Rufous, glossy, obscurely and distantly punctulate, glabrous: head frequently dusky: antennæ yellowish-rufous, with the three terminal joints greatly dilated in ♂s, less in ♀s: thorax with the disk black; scutellum black: elytra with a broad common fascia on the middle, apex and anterior portion of the suture, sometimes its entire length, black: beneath color of the elytra; feet color of the antennæ.

Var. a. Smaller; apex of the elytra and scutellum color of the elytra.

5. *L. apicalis*. Testaceous-yellow; elytra black, with the apex testaceous. 1 l. long. Pennsylvania.

Endomychus fuscus? Melsh. Catal.

Testaceous-yellow, glossy: head and thorax scarcely or very indistinctly punctulate, the former tinted with rufous, the latter with longitudinal, anteriorly abbreviated basal lines: scutellum black: elytra black, with the apex indeterminately testaceous; obscurely punctulate: beneath and antennæ color of the thorax: feet testaceous, sometimes colored like the abdomen.

Var. a. Entirely pale testaceous. *Endomychus pallidus*, Melsh. MS. Doubtless immature specimens.

Coccinellidæ Leach.

COCCINELLA, Linné.

1. *C. seriata*. Pale yellow above; head, disk of the thorax, suture and three submarginal spots of the elytra, beneath and femora, black; tibiæ and tarsi testaceous. 2½ l. long. Pennsylvania.

Coccinella suturalis, Melsh. Catal.

Ovate: head deep black, immaculate; labrum, palpi and antennæ, testaceous, the latter with the clava dusky: thorax pale yellow, tinged with rosaceous; disk and middle of the base, black: elytra color of the thorax, each with a series of three large, irregular, submarginal black spots, the first of which is hatchet-shaped, and placed on the humerus; the second spot, which is transverse-oval, is joined to the first by a short neck, and to the third by a short narrow line; the third spot is longitudinal-oval; suture with a bisinuate black vitta, terminating a little before the apex, where it is joined to the tip of the posterior spot: beneath and femora, black; tibiæ and tarsi testaceous, the former with the apical half dusky; abdomen with the lateral margins rosaceous. Allied to *tibialis* and *parnethesis*, Say.

2. *B. concinnata*. Whitish above; head and thorax maculate with black; disk of elytra fuscous; beneath blackish; feet yellowish. 2½ l. long. Pennsylvania.

Coccinella concinnata, Melsh. MS.

Head white, tinged with yellowish, with two longitudinal black lines, interrupted in the middle by the prevailing color; eyes black; mouth and palpi yellowish, the latter with the tip dusky; antennæ testaceous: thorax color of the head, densely and indistinctly punctulate, and with about seven large spots and two geminate punctures, black; spot on each of the lateral submargins suboval, one on each side of the middle at base sublunate, between which and the lateral spot is placed the double puncture or dot; two anterior dorsal spots oblique, oval: posterior dorsal spot small, oval, and posted with the anterior ones triangularly: scutellum blackish: elytra whitish, stronger tinted with yellowish than the thorax, with the disk brown, tinted with reddish, and very irregular in its outline, containing in its middle each side and near the suture a pale yellowish spot; densely and more distinctly punctulate than the thorax: beneath blackish, with the abdomen strongly tinted with reddish; feet yellowish-rufous.

Var. a. Head black, with three longitudinal white lines; thorax white, with an irregular black fascia: two short, longitudinal white lines in the middle at

base; beneath and femora black; tibiæ and tarsi pale testaceous. *Coccinella pini*, Melsh. MS.

3. *C. venusta*. Red above; thorax with four, and elytra with ten spots, black; beneath and feet, black. $3\frac{1}{4}$ l. long. Pennsylvania.

Coccinella venusta, Melsh. Catal.

Hemispheric, punctulate, above dull red; head distinctly punctured, black, with the orbits and a transverse frontal line, dull red; labrum piceous, edged with dull red; antennæ testaceous, with the tip dusky: thorax with four very oblique black spots, of which the two basal ones are large, clavate or sublanceolate, and united at their base; dorsal spots small, ovate: scutellum black, triangular: elytra more obviously punctulate than the thorax each with three submarginal, and two subsutural, large black spots, one of the latter resembles an inverted comma; suture black from a little behind the middle to near the apex, where it is dilated and becomes confluent with the terminal submarginal spot; pleuræ and epipleuræ, testaceous yellow; pectus and abdomen, black; feet similarly colored.

4. *C. modesta*. Black; elytra pale fulvous, each with six black dots; thorax with the lateral and anterior margins and two oblique abbreviated lines, white; head with a white frontal fascia. $2\frac{3}{4}$ l. long. Pennsylvania.

Oblong: head black, with a broad, anteriorly tridentate, white frontal fascia; antennæ and palpi dull testaceous, with the tips black or dusky: thorax deep black, and like the head shining, the anterior and lateral margins narrowly white; a short, oblique line each side of the middle similarly colored: scutellum black: elytra fulvous, each with six black dots, placed 1, 2, 2, 1, of which the posterior two are rather larger than the others: beneath and feet, black; postpectus each side at tip and base with a dull white spot.

BRACHIACANTHA, Chev.

1. *B. 4-punctata*. Deep black; elytra with four fulvous spots; tibiæ and tarsi dull testaceous. $1\frac{3}{4}$ l. long. Pennsylvania.

Coccinella 4-punctata, Melsh. Catal.

Deep black, shining, finely and densely punctured: head immaculate; antennæ dull testaceous: thorax immaculate; anterior angles obscurely piceous: scutellum triangular: elytra, each with a subrotund spot at base on the inner angle, and another similarly shaped and sized one a little before the apex, and nearer to it than to the suture, fulvous: beneath and femora, black; knees, tibiæ and tarsi, dull or dusky testaceous; prickle of the anterior tibiæ robust, prominent.

2. *B. fulvopustulata*. Deep black above; front, lateral margins of the thorax, and four spots on each elytrum, fulvous; tibiæ and tarsi, testaceous. 1 l. long. Pennsylvania.

Deep black, shining, densely and very minutely punctured: head with a large yellowish or fulvous frontal spot; labrum and antennæ, testaceous: thorax with a large whitish spot on each of the lateral margins, contracted on the posterior angles: elytra, each with four pale fulvous spots, placed 1, 2, 1; anterior spot occupies the inner basal angle; posterior one is placed a little before the apex, nearly equidistant from the suture and lateral edge: beneath and femora, dull ferruginous; tibiæ, tarsi, and

apex of the femora testaceous; tooth of the anterior tibiæ small. Resembles somewhat *ursina*, Fabr., but is smaller than that species, and differs in the elytral spots.

3. *B. basalis*. Head, anterior and lateral margins of the thorax, four basal and two apical spots of the elytra, pale sulphureous: two thoracic spots, elytra and beneath, black. $1\frac{1}{2}$ l. long. Pennsylvania.

Hemispheric, very minutely punctured, shining: head pale sulphureous; eyes similarly colored, with a dusky pupil, antennæ and feet color of the head: thorax color of the head, with two large subtriangular black basal spots, separated by a narrow dorsal line: elytra black, each with three large pale sulphureous spots, of which two are at base and one at apex; the inner basal spot is much larger than the humeral one; the apical spot is suborbiculate, and is placed nearer the edge than the suture: beneath blackish. Perhaps a variety of *felina*, Fabr.

HYPERASIS, Chevr.

1. *H. maculifera*. Black; head, anterior and lateral margins, eight elytral spots and feet, yellowish. 1 l. long. Pennsylvania.

Black, shining, densely punctulate: head yellowish, eyes black; palpi and antennæ color of the head: thorax with the anterior margin narrowly, and lateral margins broadly, yellowish: scutellum rather large, black, obscurely punctulate: elytra each with four yellowish spots, placed 1, 2, 1; anterior spot humeral, the two intermediate ones are placed transverse-obliquely, and the posterior spot is posted near the apex: beneath blackish; pleuræ, epipleuræ, parapleuræ and feet, color of the head.

Var. a. As in the type, but with the head and anterior margin of the thorax, black. *Coccinella 8-guttata*, Melsh. Catal.

Var. b. As in var. a., but the humeral, intermediate and apical spots of the elytra are connected by a yellowish lateral margin. *Coccinella confluens*, J. Melsh. MS.

2. *H. 10-pustulata*. Black; head, lateral thoracic margins and ten elytral spots, fulvous; feet testaceous-yellow. $\frac{3}{4}$ l. long. Pennsylvania.

Coccinella 10-pustulata, Melsh. Catal.

Shining black: head indistinctly punctulate, yellowish-fulvous; eyes black; antennæ, palpi and feet yellowish: thorax punctured like the head, with the lateral margins fulvous: scutellum comparatively large: elytra distinctly and densely punctulate, each with five roundish fulvous spots, placed 2, 2, 1; the terminal spot is confluent with the apical edge: beneath black; pleuræ and epipleuræ testaceous-yellow.

Var. a. As in the type, with the head and thorax entirely black. *Coccinella 10-guttata*, Melsh. Catal.

3. *A. leucopsis*. Black; head, lateral margins and anterior edge of the thorax white; elytra with two fulvous spots on the middle. $\frac{3}{4}$ l. long. Pennsylvania.

Black, shining, finely and densely punctured: head whitish; eyes blackish; antennæ and anterior feet dull yellowish: thorax with the anterior edge and lateral margins white: scutellum moderate, acute-triangular: elytra each with an orbiculate fulvous spot on the middle; beneath blackish; hind feet fuscous

The elytral spots of this species are sometimes deep scarlet, and the tip of the clypeus dusky. It is the *biguttata* of Melsh. MS.

4. *H. fimbriolata*. Punctulate, black; front, exterior margins of the thorax and elytra, fulvous: anterior feet dusky testaceous; beneath, and intermediate and posterior feet blackish or dusky piceous. $1\frac{1}{4}$ l. long. Pennsylvania.

Coccinella fimbriolata, Melsh. Catal.

Var. a. Thorax immaculate. *Coccinella lateralis*, Melsh. Catal.

EXOCNOMUS, Redtenbacher.

E. praeextatus. Black; head, lateral margins of the thorax and elytra, two basal spots and a common central one of the latter, fulvous: feet testaceous-yellow. $1\frac{1}{2}$ l. long. Pennsylvania.

Coccinella praeextata, Melsh. Catal.

Black, densely punctulate, shining: head fulvous or yellowish, with the clypeus at tip slightly emarginate and elevated: mouth sparsely whitish pilose; antennae color of the head; eyes blackish: thorax with the lateral margins broadly fulvous: scutellum very small, hardly apparent: elytra with the inner basal angles triangularly, and the lateral margins broadly, fulvous, the latter with the lateral margins similarly colored, and united to a large common central spot by a narrow fascia, spot and fascia color of the lateral margins: beneath blackish; feet color of the head. The labrum is slightly produced.

Var. a. Head and thorax uniform black; femora blackish; tibiae and tarsi dull dusky testaceous. *Coccinellæ fimbria*, J. Melsh. MS.

CHILOCORUS, Leach.

C. verrucatus. Above and feet black; elytra with a common and two basal spots, and beneath, red. $3\frac{1}{4}$ l. long. Pennsylvania.

Coccinella verrucata, Knoch MS.

" *trimaculata*, Melsh. Catal.

" *tripustulata*, De Geer, Ins. v, 393, 2?

Black above, shining, impunctured: head black, immaculate; antennae rufo-testaceous: thorax with the anterior angles and edge, obscurely rufous; elytra each with an oblong basal spot, and suture a little behind the middle with a common linear one, cinnabar-red: feet blackish; beneath light scarlet-red: wings fuliginous. This may prove to be a variety, but not the type, of *tripustulata*, De Geer.

SCYMNUS, Kugelann.

1. *S. collaris*. Black; head, anterior and lateral margins of the thorax, and feet rufous. $\frac{3}{4}$ l. long. Pennsylvania.

Coccinella thoracica, Melsh. Catal.

Subhemispheric, black, punctulate, pubescent: head and thorax, rufous, the latter with a semiorbicular black basal spot in front of the scutellum, the latter very small: elytra with the apical margin narrowly and obsoletely testaceous: beneath black, with the tip of the abdomen testaceous; antepectus, antennae and feet, rufous; hind femora at base dusky. Size, form and markings entirely of *Coccinella parvula*, Fabr., of which it may be a local variety.

2. *S. punctatus*. Black, distinctly punctured; elytra each with a red spot. $\frac{1}{2}$ l. long. Pennsylvania.

Oval, deep black, shining, pubescent: head black, with an obscure, transverse, impressed line below the front labrum mouth and antennæ, piceous: thorax finely punctured, with the anterior edge piceous: scutellum distinct: elytra comparatively strongly punctured, long somewhat dilated before the middle, each with a small orbicular red spot near the middle; humeral tubercles small, distinct: beneath and feet blackish, the latter rather piceous.

3. *S. flavifrons*. Black; head and a large spot behind the middle of each elytrum, yellowish; tibiæ and tarsi, testaceous. $\frac{2}{3}$ l. long. Pennsylvania.

Coccinella flavifrons, Melsh. MS.

Subhemispheric, black, shining, pubescent, punctulate: head and antennæ, yellowish; eyes black: thorax minutely punctured, with the anterior angles obsoletely testaceous: scutellum minute: elytra more distinctly punctulate than the thorax, each with a large orbicular yellowish spot behind the middle, and nearer to the suture than the lateral edge: beneath black: tibiæ and tarsi, testaceous; femora often dusky, sometimes testaceous.

[NOTE.—Dr. Melsheimer's "Descriptions of new North American Coleoptera" have been in course of publication in these Proceedings since April, 1844. In Vol. II, No. 2, will be found the commencement of this valuable and elaborate paper. The additional portions have appeared at such intervals in succeeding numbers, as the limits to which the Society is in some measure obliged to restrict its publications, and the claims of other contributors to the pages of the Proceedings would justify. These descriptions, together numbering about six hundred, are now concluded. The great care and labour bestowed upon them by the author, afford the best evidence of their correctness, and consequently of their value to those interested in this particular order of Insects.]